



THE MONARCHS OF THE DUNES

Mount Tom, Mount Holden, and Mount Jackson as seen from the Dunes Highway

Indiana Dunes State Park

A History and Description



By
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Table of Contents

Duneland

| | |
|--|----------|
| WHAT JOHN TIPTON THOUGHT..... | 7 |
| THE INHERENT ELEMENTS..... | 7 |
| DUNES REGION DESCRIBED..... | 8 to 16 |
| THE STATE PARK: ITS GENERAL CHARACTER..... | 9 |
| THE "BATTLE FIELD"..... | 12 |
| THE LURE OF THE BEACH..... | 15 |
| THE ESTHETIC APPEAL..... | 16 |
| EXPLORING THE PARK BY TRAILS..... | 19 to 30 |
| FLORA AND FAUNA OF THE PARK..... | 30, 31 |

Park History

| | |
|---|----------|
| REASONS FOR THIS PARK AND ITS FIRST PROMOTERS.... | 34, 35 |
| NATIONAL PARK MOVEMENT..... | 35 |
| STATE PARK MOVEMENT..... | 36 |
| LEGISLATIVE ACTION AND FIRST STEPS..... | 37 |
| LAND GIFTS..... | 38 to 40 |

Regional History

| | |
|-----------------------------------|----------|
| INDIAN HISTORY..... | 43 |
| OCCUPANCY BY THE WHITES..... | 44, 45 |
| BOOM DAYS AND MUSHROOM TOWNS..... | 46 to 51 |

Miscellaneous Features

| | |
|------------------------------|----------|
| THE BAILLY TRADING POST..... | 52 to 54 |
| THE TEN-MILE STRIP..... | 54 to 57 |
| THE CALUMET REGION..... | 57 to 61 |
| DUNES LITERATURE..... | 61 |
| THE SECRET OF DUNELAND..... | 63 |

Illustrations

| | |
|---|----|
| THE MONARCHS OF THE DUNES—FRONTISPIECE..... | |
| THE CHALLENGE..... | 13 |
| A SECTOR OF THE BATTLE FIELD..... | 14 |
| THE RAMPART..... | 17 |
| THE ASSAULT..... | 18 |
| THE BREACH..... | 21 |
| THE INVASION..... | 22 |
| THE VANGUARD..... | 25 |
| A VICTIM..... | 26 |
| RELICS OF THE CONFLICT..... | 29 |
| THE TANGLE OF THE SWAMP..... | 32 |
| THE BROODING MARSH..... | 33 |
| WAVERLY BEACH, LOOKING EASTWARD..... | 41 |
| WAVERLY BEACH, LOOKING WESTWARD..... | 42 |
| THE PAVILION..... | 62 |

THE INDIANA DUNES STATE PARK

By George S. Cottman

Duneland

What John Tipton Thought—Man's valuation of earth's offerings varies with time, place and conditions, and the appraisements of one generation are not those of another. As thus:

In 1821 John Tipton, representing Indiana, and acting jointly with a commissioner from Illinois, surveyed the boundary line between the two states. As was the wont of this pioneer, he kept a daily record or journal of the work in hand, and in it we find it stated that the approach to Lake Michigan was difficult to survey on account of wet and marshy prairies, buttonwood swamps and other hindrances. Then from the point where the line met the lake they followed the meanders of the lake shore eastward to ascertain the southern extremity of the basin. The item of chief interest here is Tipton's impressions of this country. His conclusion, briefly put, was that these ponds and marshes and sand hills "can never admit of settlement nor never will be of much service to our state." The area he had in mind is today a phenomenal region by reason of its seething industrial energies and its creation of wealth.

Tipton's judgment may have been sound and practical as measured by the knowledge and ideas of his age. To the pioneer the promise of a new land lay largely in its agricultural possibilities, and there was certainly little hope for agriculture here. Secondarily, it lay in its commercial possibilities, but John Tipton could have small conception of the complex social forces that in another generation would make this area at the southern end of Lake Michigan one of the great business spots of the world. That would involve some comprehension of the railroad as a factor in civilization, of the great Northwest as a productive empire, and of a vast and ceaseless traffic passing to and fro between it and the East.

The Inherent Elements—And yet even long before Tipton's day the elements of Twentieth century conditions were fore-

shadowed. They were involved in the very geography of the country so long as the continent was peopled. There was a primitive Northwest and a primitive East, between which the red aborigines passed to and fro on errands of peace and council or in forays of war, and where now the white man's paved highways and steel rails criss-cross the country the trails of the Indian tribes rounded the curved end of the great lake as the shortest way by land to their various objectives.

Again, before we part company with honest old John Tipton, he could not be expected to know or even sense that this wild and waste strip of dunes and swamp along the lake's edge would in the unfolding of conditions come to have a new and unsuspected value, not as a factor in business, but as a rescue and relief from the turmoil we call civilization.

THE DUNES REGION DESCRIBED

As Seen From the Lake—The Dunes region of Indiana is a far-stretching crescent of sand hills and ridges forming the southern boundary of Lake Michigan—a crescent reaching from Michigan City to Gary. Originally it had a much wider sweep, but Chicago, Gary and the intervening industrial centers have obliterated what were once dunes. A good introductory glimpse of the region may be had from the boat that carries passengers daily between Chicago and Michigan City, and which toward the eastern end of its trip affords a panoramic view of what looks to be a richly embroidered hem to the distant land. Here, from the boat's deck, the low, undulating skyline shows, a long belt of white mottled and crowned with dark verdure, and over the whiteness of it play delicately shifting tints as the cloud shadows, riding over Duneland, alternate with the strong, yellow sunlight. The view is at its best when one is opposite the dunes park with its giant hills looming up and the embossed shore curving away westward like a slender sickle till it narrows down to the vanishing point.

A Birdseye View—Another long-range view that shows the topography of the region much more in detail is the survey to be had from the top of one of the towering sandhills that here and there overtop the general altitude of the dunes.

The highest of these is Mt. Tom, which with Mt. Jackson and Mt. Holden, of almost equal height, make a group of three dominating dunes in the state park. The first named is officially credited with a rise of 190 feet above the mean level of the lake—no great elevation, doubtless, for a real hill or mountain country, but here it suffices to command the landscape in all directions. Northward the wrinkled, crawling surface of the lake spreads away till it meets the sky. A little north of east, some ten miles away, the buildings of Michigan City show dimly beside the water; westward the city of Gary can be located if the air is clear, and between these two centers of population stretching the long, narrow belt now known as the dune region, averaging something more than a mile in width.

The State Park—A half mile to the west of Mt. Tom and two and a half miles to the east, approximately speaking, lies that most picturesque part of the region, which is now in possession of the State of Indiana, and made into a public park. This area of about three and a half square miles (2,210.47 acres), and much more beyond its boundaries is, in the main, heavily forested. It all lies before the eye, and its topography may be understood at a glance. That part of it lying nearest the lake shore is heaped up into dunes, or hills and ridges of sand with their verdure-choked valleys and pockets, but back of these one sees the low, flat areas where swamps and marshes give diversity to the place. Here and there amid the general vestment of greenery gleam whitely the naked sands in spots and tongues, showing where the winds have conquered the vegetation. The crest of Mt. Tom itself has been scooped out by aerial attacks till it suggests a great crater, and the shifted sands piled up on the western side of it gives this hill its preeminence for altitude. Half a mile away, just at the west boundary of the park, lies a fine example of the “blowout” and traveling dune, which present the most famous features of this sand region, and of which more will be said in another place.

Dune Making, Past and Present—Looking far to the southward over an intervening level country one with a little geologic lore realizes that this process of dune making is a very old one, for there ridge lies beyond ridge till their blue is

limned against the gray horizon. These are old dune regions, marking ancient beach lines formed when the waters of the big lake reached many miles further south. All that is part of a larger story, but it quickens the appreciation that here in the present duneland we are in the midst of nature's great laboratory and an eyewitness to her works as they still go on.

Nature Versus Civilization—Another thing that challenges interest in this birdseye view from the hill top is the unusual juxtaposition of primeval nature and a seething civilization. Looking from Mt. Tom we have immediately about us a wilderness so untouched by the destroying hand of man that it preserves for us the wildness and spirit of aboriginal days. Hardly more than a mile away from the mount that lifts its top above this privacy of nature runs the Dunes Highway, a modern, hard-surfaced thoroughfare, and one of the most-used of the highways that run to and from Chicago. Here the automobiles are forever skurrying, looking from the distance like lines of swift-moving beetles scuttling in opposite directions. Paralleling the highway is an electric railway with its hourly service each way, and farther off, out of sight but within hearing, are other railroads. As complement to this activity, yonder, hidden in the misty west, lies the city to which all roads lead, mighty Chicago, the second largest metropolis in the nation, with its more than three million people. This side of Chicago, almost within sight from our hill-top, is the amazing "Calumet region" with its multiplication of industries and its ever increasing population. South and east in Indiana are other cities, to say nothing of the rural residents, and it has been affirmed that within a radius of forty miles from the dunes park the population will aggregate little short of ten millions. Whether or no this is accurate there undoubtedly will be ten millions some day, and there are enough now to justify all the arguments for a dunes park and all the labor it has cost to get it.

A Cross Section—Another introduction to the State Park that will aid in the understanding of its general topography is by the road leading into it from Tremont station and the pathway that continues onward to the lake front. These, leading through the heart of the park, afford a typical cross-section view of it. First, there comes a stretch of level fields,

succeeded by woodlands; then a long rustic footbridge crosses the end of the big forested swamp with its growth of rank ferns breast high, and after that the dunes themselves, the great piles of sand densely covered with the green of bushes and trees, of weeds, grasses and vines. Through and over these by many ups and downs the trail leads till it reaches the lake front. This cross-section gives us an idea of nature's *modus operandi* in producing the dunes region. All this land as originally redeemed from the lake was level and low, and the chaotic tumble of hills piled there by the agency of the wind are an aggressive invasion of the land, which aggression is contested at every step, as further acquaintance will show us.

The Lake Front; Making of the Dunes—I have spoken of the dunes region as "nature's laboratory." If one part of it more than another fits this designation it is the lake front, where one can study not only the manufactured product in its distinctive forms and manifestations, but also the manufacturing process from its beginning. It may be regarded as a natural industry quite as definite in its results as those that have been established by man not far away, only nature has no thought of the omnipresent dollar in connection with her activities. Here wind and waves are the elemental agents. Down the long trough of Lake Michigan, which as an unbroken highway stretches northward more than three hundred miles, come the prevailing north and northwest winds, seldom at rest, and forever driving the flood against the southern shore, now in lipping waves and again in pounding breakers. The native rock of the lake bed and of glacial drift make the raw material for this restless energy to work upon, and what moving water can do to rock may be appreciated if we note the shingle on any beach where it may be found. There all pebbles and rock fragments are worn smooth and round by attrition, even so hard a substance as glass being unable to resist the constant wearing process. The wind-driven waves are veritable mills of the gods, grinding both slowly and "exceeding fine." Each scalloped film of water that comes sliding up the hard strand carries back in its recession much of the sediment it carried up, to be churned over till worn finer than the finest meal, but each as it recedes leaves the outline of its

farthest reach in the shape of a tiny ridge of sand, almost imperceptible a few seconds after its deposit. At this point the waves have completed their task and delivered their grist. The amount of it seems infinitesimal by contrast with the seas of sand lying before the eye, but untold millions of waves working day and night through the ages can work wonders. Then the process is vastly accelerated when, as often happens, the storms come riding in fury down the lake and the roaring surf not only assaults the shores but tears from the bottom of the basin and pushes landward rocks that in time will be made into more sand.

The Battle Field—Thus far the waters, but the winds are not yet done. When the ridged sand swept up the strand and left there gets its chance to dry it becomes subject, like dust, to easy shifting, and the push of the winds from the north, west or east carries it farther shoreward. It is a veritable invasion of the land—an invasion that threatens to smother down whatever lies in its path. The vegetation opposes this, and if the contending forces were sentient and intelligent creatures the scene of their conflict could not more appropriately be called a battle field. For a short distance up the sloping shore the mechanical forces have it all their own way; then life in the form of sundry sand plants—grasses, vines and shrubs—appear on the shifting waste and flourish where it would seem no live thing could find sustenance. The part these play in arresting the invasion seems almost incredible. Their astonishingly long surface roots and lateral rootlets, wherever they grow, bind down the loose particles of sand, and even their upright stems, by some curious law, make nuclei for the fine drift that forms about them in little cones. Multiply and enlarge these roots and stems, add small trees to the obstructing growths, and the cones become proportionately larger, and here we have the beginnings of the dune-making process.

Thus these living pioneers of the battle field fix the surface so that other vegetation can reinforce them, and so we find the flora of the region, from grass to tree, crowding toward the lake front. The dunes, forever replenished from the beach, forever pushed by the winds, and as persistently stopped by a sea of vegetation may take the shape of cones or ridges or any intermediate form. Paralleling the lake



THE CHALLENGE—BLIND FORCES VERSUS LIFE



A SECTOR OF THE BATTLE FIELD

front and running along the beach for miles we find a massive, lofty ridge that suggests a great rampart guarding Dune-land. For the most part this rampart is fixed there by luxuriant growths of vegetation, but here and there the battalions of Aeolus have forced breaches through it; the rooted flora is undermined and dragged down to perish, and through the gap one may see the loosened sands scooped out from the foreground to be spread out in a broad sheet beyond, or there piled up anew. These are what are called the "living" or "traveling" dunes, and they illustrate how, in spite of the vegetation, the labyrinth of hills that make the dunes belt have been rolled inland before they were finally stopped and anchored. The gaps in the great ridge, just spoken of, are known as "blowouts," and as allusions to these phenomena are frequent in the dunes literature they will be described more specifically in another place.

The Lure of the Beach—No part of the Dunes region appeals to so many people as does the water front with its many attractions. The students of nature seek the place at all seasons and witness phenomena seldom seen by the ordinary summer visitants. In winter, when the trumpeting winds are at their wildest, there are spectacular exhibitions. The sand, where it lies loose and dry, is caught up into visible clouds and drifted like snow into broad white expanses, leaving them patterned with graceful, curved ripples, while from the dune crests the same material streams upward like smoke from so many chimneys, to be spread out into filmy curtains and sown far to leeward. The abrasive force of the driving particles operates like an artificial sand blast, and if one wants proof of this he can any time find it among the exposed dead trees where the hard wood of broken limbs and roots are rounded and smoothed to points like thorns. Under these tempestuous conditions things change rapidly. E. Stillman Bailey related that on a certain occasion young trees three feet high at noon were completely buried at night-fall of the same day, and another writer, Hu Maxwell, tells of the topography of a region being so changed within a period of two weeks' time as to be hardly recognizable. A more searching inquiry into the causes of sand formations, sand movements and air currents discloses much that is fascinating to the scientist, but which can not be entered into here. Suffice it to say that the separating processes of wind and

wave make a product free from all dirt, as soft and yielding as a couch, and which as it lies stretched for miles along the water's edge invites all humanity to its bosom.

A Universal Playground—And how humanity responds you may see if you will visit the beaches of a warm summer's day, especially if it is at the week's end, when people are freer to come. Of these folk a comparatively small percentage care for the woods or for exploring wild places, but all are susceptible to the lure of sun-warmed waters washing up a gently-shelving strand as smooth as a floor, and with miles of soft, clean sand to play in. At Waverly Beach, which is the most frequented one because of its accessibility by automobile, one may study human nature in a new aspect. Hither they come by the many hundreds and for the time being forget all the conventionalities of civilized life. Men and women become children again and surrender themselves to the hilarious pleasures of the hour with an abandon that suggests the nymphs and swains of Arcady. The delicious feel of cool, wet sand to the naked feet, the playing in the surf or in the dry sand, and the emancipation of the body from superfluous clothing is a return to that aboriginal estate which few of us have quite outgrown.

The Esthetic Appeal—For its exhaustless esthetic attractions the lake front is worth many a visit. Exhaustless is the word, for those two immensities, the water and the sky, are protean in their aspects. Sometimes the eye can discern where they meet, sometime not. The visibility is affected by subtle factors: The morning sunlight is not like that of the afternoon, and oft times a faint, impalpable haze makes of the distance a realm of mysteries; or again, a firmament of clouds reflected from the flood below keys the whole scene to a somber mood. A sunset is a vision of glory, especially when the great rayless ball of fire slowly sinks behind barred and rifted clouds that paint the heavens with their luminous hues. Then the waters emulate the vault above and there is a pageantry of colors—crimson and lavender; shimmering greens and grays and purples, and much more, not to be described by any pen; nor could any brush rival this artistry of the sun. As in fable the swan dies to the music of her own song, so dies the god of day, couched in beauty of his own making.



THE RAMPART
(Observe the Early Morning Sunlight Streaming from the Left)



ASSAULT OF THE SAPPING WINDS UNDERMINING THE VEGETATION
(Observe the Exposed Roots)

EXPLORING THE PARK

Roads and Trails—From the foregoing pages the reader may have gathered that what with swamps and marshes, forests and sandhills, the Dunes Park could not well be explored by vehicle. As a matter of fact the tract is traversed almost entirely by foot trails, and its inaccessibility to autos or wagons is one of the attractions of the place, for there are times and places when escape from the ubiquitous auto is a relief. But two roads connect with the park, and only one of these reaches the lake, its northern terminus being Waverly Beach. At this latter spot are situated the chief service features of the park, the improved highway thither leading directly to the tourists camping grounds, to an ample parking space near the lake front, and to a far-stretching bathing beach that may fairly be described as ideal. Here also is a spacious pavilion, the upper story of which is equipped, temporarily, as a bath house and with a complete restaurant refreshment service and a store of supplies for cottagers on the ground floor.* The parking space referred to has been increased by putting a stretch of the contiguous stream (Fort Creek) under cover, and about 850 autos can now be accommodated at one time. Mt. Tom, the loftiest of the dunes, is near here, as is also one of the most curious and beautiful of the "blowouts," the hollow of which was used for staging an elaborate pageant in 1917. This performance, a part of the propaganda for arousing public interest in the establishment of the park, will be mentioned more at length hereafter.

The other road leads from Tremont station, passes the Duneside Inn (the present small hotel) and ends at what is known as Wilson's Camp, a half mile or so south of the lake front, from which point the beach is reached afoot over trail number 10.

Aside from these two thoroughfares that connect the Dunes Highway with the park the latter is threaded throughout its length and breadth by foot trails and marked and numbered from 2 to 10. Just how many miles of these there are has probably never been estimated, but one might spend days exploring their winding mazes before exhausting their attractions. That hiking has not become a lost art in spite of

*This pavilion was to have been a brick structure, but owing to a personal gift from Messrs. Lawrence and Frank Whiting, it was built of the more beautiful limestone.

the auto is proven by the numbers of people who may be found tramping these paths through the wild places, clad for living in the rough and bearing on their backs the outer's equipment. For such as these adventuring of this sort has its own tang, especially in the fresh stimulating air of the early morning. To go questing through the forest depths where the verdure all about still glistens with dew and faint mists mingle with the sunlight that sifts through the green canopy to sow the ground with flakes of gold; to hear the blithe notes of birds, the whispering winds among the trees, and the faint murmuring of the restless lake beyond the dunes is an experience to key up the spirit and put tonic in the blood.

Wilson's Camp; A Starting Point—The visiting stranger who desires to hike over these trails will be greatly aided by the small hand-map that has been issued by the Department of Conservation. By it he will see that the paths are numbered from 2 to 10, each traversing a different section of the park. Most of these converge at Wilson's Camp, at the terminus of the Tremont road, and as this spot is a fine picnic ground where autos can be parked, and is convenient to the interurban station and also to the Dunes Inn, it makes a favorable point of departure for those who take to the foot paths. This "camp" takes its name from Wilson and Company, meat packers, of Chicago, who established it for their employes, equipping it with a good-sized club house, out-of-door tables, furnaces and a flowing well. Adjacent to it is another camp ground, with buildings and well, belonging to the boy scouts of Gary.

Trail 2—This trail and the one numbered 10, the two longest routes in the park, are confined to that part of the tract which lies to the eastward of Camp Wilson. Number 2 makes the entire circuit of that area. After passing through the scouts' camp it enters a forested swamp area that stretches along the southern side of the park for more than two miles. In two or three places the pathway leaves the somber shadows of the tall woods to run through sunny glades shorn of their original timber but now growing up with new forms of floral life—with grasses and wild strawberries, with blackberry brambles and wild roses. Here also may be found the deep rich orange of the butterfly weed, the yellow and scarlet bells of tall tiger lilies, the brownish-red flambeaux of young sumac



A WIND-BREAK THROUGH THE RAMPART, OPENING THE
WAY TO INVASION



THE INVASION: A "LIVE" OR ROLLING DUNE ATTACKING THE FOREST
(Observe the Partially Buried Shrubs)

and, rarest of all, the delicate creamy blossoms of the cactus plant, which here seems to be far away from its native home. Some of these plants, such as the strawberries and tiger-lilies, are reminiscent of man's sojourn here, and this is borne out by certain pits in the ground that speak of human habitations now gone and by traces of an old, almost obliterated roadway that once led into the swamp from the south. George A. Brennan, in his book, "The Wonders of the Dunes," tells us that here was a part of the old Furness farm, once occupied and under cultivation, but long since abandoned and desolate. Its solitude was once enlivened by the presence of a haunted house standing somewhere hereabout, but that interesting feature is now gone. One curious freak of nature should be noted before leaving this spot. Not far from the meeting of the trail and the disused road mentioned there is a mound of mold some six or seven feet in diameter left by an uprooted linden tree. From this little mound not less than twenty-five young lindens are struggling for a footing, the outer ones leaning away from the center at a sharp angle and the whole resembling a gigantic lilac bush, its combined foliage making one beautiful symmetrical cone of green. Wherever these open glades with their second growths occur one should look, also, for those gossips of the woods, the quaking asps, which stand in groups forever whispering to each other.

Trail 2 finally reaches an old road running northward which makes the east boundary of the park. This road crosses the swamp and a great marsh lying between the swamp and the dunes. The marsh is a distinctive feature of the park with its long stretch of shallow water thick-grown with cattails and other forms of aquatic vegetation, and populated with the fauna common to such habitat. Beyond the marsh, still going north, the road runs into the foot of a sandhill and after that becomes a trail to the lake shore. The return from here to the Beach House Blowout by way of the beach, and thence over the dunes back to Wilson's Camp, makes a complete circuit of the eastern section (about two-thirds) of the park.

Trails 10 and 9—These two trails, along with No. 2, make possible a pretty thorough exploration of the eastern part of the park. As the last-mentioned path followed the south side of the swamp lands so number 10 parallels the north side. Starting at the Wilson Camp it crosses the foot of the big swamp then turns eastward through heavy timber, skirt-

ing the dune hills on one side and the densely-grown low lands on the other. Here the two habitats mingle their respective flora, conspicuous on the swamp side being occasional beds of great ferns, while noble specimens of the oak, elm, maple, tulip poplar and other forest trees cast their deep shadows over all. At one place the path emerges into a good-sized glade where the dry ground, open to the sun, and overgrown with a different vegetation, adds diversity to the way. A half mile or so beyond the glade the trail, after skirting the great marsh quite closely, reaches the "pinery," so called because of two or three groups of large pine trees that grow there. Some fine tulip poplars, the blossom of which is the Indiana state flower, also are found in this locality. It should be noted that the traveler along this forest highway may in many places explore to right and left, finding sequestered nooks that will feed his interest. For example, at the east end of the glade referred to, a divergent pathway running under a green arcade of overarching boughs leads southward to a sluggish little stream, its waters made brown by the juices of the swamp. The top of the water is held motionless as a film of ice by the surface driftwood, but underneath the visible current goes sliding, bound for Dunes Creek and the lake. This stream is said to have been bridged at one time, and the path leading to it was evidently a continuation of the old roadway leading through the Furness farm, which we found on Trail 2.

Soon after leaving the last group of pines we find the trail intercepted by a great "live" dune which is here encroaching on the border of the marsh. This necessitates climbing the high, steep hill of loose sand, and once on top the hiker finds himself overlooking the "Big Blowout," which is the largest and most remarkable of these great breaches in the ridge that parallels the lake shore. The spectacle from the dune's crest is that of a huge undulating waste of the white sand sloping towards the lake and down into a vast amphitheatre that will measure perhaps a thousand feet across. This expanse is desolate and lifeless as a desert except for little oases of green here and there and around the protected edges where vegetation—trailing grape vines, clumps of coarse grass and other sand plants—are getting a footing. One curious exhibition is the tenacity with which this vegetation has held together hillocks of sand while the insistent winds, eroding the mounds



THE VANGUARD—VETERANS OF THE STRIFE



A VICTIM

(Observe the Depth to which the Tree is Submerged)

on all sides, have uncovered the long rootlets that grew there till the slopes are garmented with fibrous trailing masses. Again, one may find spots where the sands drifting from various directions have formed pockets that are ruthlessly closing in on trees, bushes and other plants that are rooted there, and which are thus caught as in a trap. The tragedy of this grim extinction of life is, however, most impressive at the forefront of the advancing dune where, rolling forward like a huge billow, it relentlessly invades the forest, slowly swallowing up whatever lies in its path. Trees buried up to their boughs are no unusual thing. One tree, the cottonwood, it is said, defies the onslaught of the foe by converting its branches into roots when they are covered, but most species are not equal to this, and after remaining green for a season or so, yield up their lives. On the slopes of the Big Blowout, where the sands have been scooped out to build up the moving hill further inland, there stand the dead snags of some half-hundred trees, once covered and killed there and now partially uncovered again. Someone has aptly dubbed that place "The Graveyard," and it is so called in the literature of the dunes.

From this dune one may continue on eastward to the park boundary or descend the blowout through its big bowl to the lake shore. In either case the loop made by Trail 10 returns homeward by the beach, the firm, damp sand of which makes the easiest of paths and the pleasantest to tired feet if taken bare-footed. Or, if one desires to return by Trail 9 he can turn in at the Furnessville Blowout, the first one west of the one he has just left, and climb to the higher levels again. From this point the path mentioned threads the dunes for a mile or so to the Beach House Blowout where it merges with Trail 10, which in turn leads back to Wilson's Camp.

Trails 3 to 8—This system of five trails makes a network of paths over that part of the park lying to the west of the Tremont entrance and Camp Wilson. Their windings and mutual mergings can not be made very clear by verbal description, and he who desires to explore them should have for guide one of the small park maps that have been mentioned. They will be here considered with reference to Waverly Beach as their starting points.

Trails 3 and 4, starting, one from the beach and one from the parking place on the beach road, make two separate routes

over the dunes to the summit of Mts. Tom, Holden and Jackson, the three dominating domes of the park, from which the name "Tremont" (three mountains) was derived. From Tom to Holden one has his choice between routes 7 and 8, while the latter path, turning southward at Holden, continues on over the top of Jackson, and still onward to Camp Wilson. Here 8 makes still another turn, this time westward, and leading back to the Waverly Beach road. Trail 7 follows another route, following the valleys from the three mountains to the Tremont entrance. These trails to and from the triumvirate of big hills take the hiker through what some consider the most scenic part of the park, the hills, ridges and winding valleys, all heavily forested, attaining to a magnitude that suggests a small mountain system, made more impressive by its wildness and solitude.

Trails 5 and 6, as well as part of 8, thread the level lands to the south of the elevated dunes section. Both 5 and 6 lead eastward from the Waverly road where the latter crosses Dunes Creek, a short distance south of the parking space. Number 5 follows the north side of the creek and 6 the south side. Both offer a striking and pleasing contrast of surroundings when one, coming from the beach near by, with its gaiety, life and color, plunges directly into the greenwood where, after a few rods, noise succeeds to forest silence, the intervening dunes shutting off the sounds of the beach and road. Number 5 follows the windings of the creek under a leafy canopy for some distance and finally merges in Trail 8, which on this leg of its wanderings is a rude wagon road, made such for the accommodation of sundry shacks and club houses that were built in these lowlands before they became state property. In the park improvements this road and Trail 5 will be a connecting link for autos between the Tremont and Waverly Beach roads. Near where trail and road now merge there is a diverging path on the right which connects with or becomes Trail 6. This presently crosses Dunes Creek and after some erratic windings emerges into a pleasant and secluded camping ground with a commodious summer home occupied in season by the girl scouts of Whiting, Ind. Leaving these grounds the path skirts along the east side of the park's tourists' camp, which is bounded on the west side by the main or Waverly Beach road. This camp, occupying fine rolling and well shaded ground, has abundant space for tourists tents



RELICS OF THE CONFLICT

(These Have Been Buried and Then Re-exposed by the Shifting Sands.
Observe the Thorn-like Spines Abraded by Flying Sands)

and is provided with all conveniences for the accommodation of those who may wish to use it, the camping fee being twenty-five cents per day. It is said that the place was long ago a favorite camping spot for the Indians, which is quite probable in view of its well-drained surface and its location besides the creek. After winding its way along the creek bank through wild growths of bushes and woodland the trail comes out on the auto road, but a short distance from where we left the road on number 5. Thus these two trails, meeting as described, make a circuit at the end of which the explorer is back at his starting point, and it is one bit of easy journeying that should not be missed by those who like to walk.

A FIELD FOR THE NATURALIST

The state park is by no means exhausted when one has explored its trails and become familiar with its surface features. Those who have eyes for the hidden things find a rich field for their observations not only in the natural processes that are operating there but in the study of life forms.

The Flora—Willis Blatchley, former Indiana state geologist, says (report of 1897): "There is no better place for an extended botanical study of a limited area in the state than among the dunes, swamps, peat bogs, prairies and river bottoms of this area;" and at the close of a list comprising 103 botanical specimens found in Porter and Lake counties he states that these are "probably less than one tenth of the flowering plants of the two counties." While this applies to a larger area it also applies to the state park. Dr. Stanley Coulter, Dr. Henry C. Cowles, Dr. Herman Pepoon, Prof. Elliott Rowland Downing and other eminent botanists have published books and monographs on the flora of the Indiana dunes country, and one of these, Prof. George Pinneo, speaks of it as one of the greatest floral regions in the United States. "The hillsides," he says, "are purple with violets and lupine. There are the beautiful fringed gentians and hundreds of orchids. The distribution over the season is equally remarkable, but at all times, from the coming of the trailing arbutus early in May until the passing of the gentian in October, one's search is always rewarded with some of nature's most beauti-

ful productions." Among them is the cactus, with its beautiful yellowish blossom, and the pitcher plant.

The Fauna—The faunal life is mostly in the smaller forms that are so inconspicuous as to require sharp eyes for their discovery, but Professor Downing, in his book "A Naturalist In the Great Lakes Region," tells us in all soberness that Miss Nell Saunders took an "animal census" one summer and found "sixteen million animals to the acre," distributed as follows: Three-fourths of a million on the ground, three millions on the herbaceous plants, ten million on the shrubs, and the remainder on the trees. How this amazing census was taken the author saith not, but even if a few of the bugs were counted twice the claim for wealth of fauna would seem to be justified. What makes this wilderness multitude more interesting is that it is grouped and zoned, as Mr. Downing tells us, certain fauna "associating with certain vegetation"—which is another way of saying that both flora and fauna are adapted to habitats. Sometimes there is an insect tragedy when a wind from landward carries myraids of them out to the lake, where they become food for fishes, or, in due time, are carried back by the waves to be heaped in windrows on the beach.

Frogs and the familiar painted turtle, are, of course, to be found in the marshy places, and in the woods the hiker occasionally runs across a blue racer snake, a skunk, or even a groundhog—all of which are interesting objects of study, with the proviso that you do not cultivate the skunk too intimately. The larger animals of the original wilderness found refuge in the dune country long after they were driven out of the settled districts. Bears, deer and wild cats are said to have been killed there as late as the 'seventies, and wolves, porcupines and badgers much later. Racoons, opossums and squirrels are still found. Birds of many kinds find food and shelter here at different seasons, and as they will be protected from destruction within the state park there is every reason to expect that it will become a bird refuge and an ideal place for ornithological study.



THE TANGLE OF THE SWAMP



THE BROODING MARSH

History of the Park Movement

Why a Park—One of the truths forced upon the social thinker is that civilization, with all its vaunted advantages, has its sinister side. From one angle man seems to be creating a Frankenstein that threatens to destroy him in time, involving as it does the congestion of herded multitudes and a submergence in artificial conditions that enslave the individual and rob him of something that is his birthright. Perhaps we may say that this birthright is contact with the elemental things which feed and must feed the normal existence as roots drawing from the subsoil.

At any rate it is a commonplace of history that human society has its diseases and that civilizations have perished, and the view of the present day is that one remedy is in getting back to nature. Hence the movement of late years for national and state parks so that mankind can, in a way, escape from too much civilization and cultivate the touch with nature by easy access to attractive nature spots selected and preserved as public possessions. There are special reasons why such a public park should be preserved here at the south end of Lake Michigan. On the one hand the adjacent region has already become one of the great population centers of the country and is destined to a yet greater growth and congestion that must be accompanied by the peculiar evils of enormous urban aggregations. If ever there was a place where the moiling multitude needed some escape in the direction of wholesome natural recreation it must be here in this great industrial section where the mill and the factory are taking possession. On the other hand nature has formed here, at the very threshold of this populous region, a recreation spot that is ideal and, in its character, fairly unique. The art and foresight of man could not have better prepared for a need than nature prepared for this need. But material progress is ruthless and knows no sentiment. In its invasion of new and desirable territory big business was steadily creeping around the lake coast, obliterating the dunes region as it came and threatening to destroy it all. Fortunately before it was too late, there arose those who had the vision to see the larger

possibilities of the dunes as a nature spot, and who acted accordingly, and to these posterity will owe a debt of gratitude.

First Park Promoters—The Prairie Club of Chicago is credited with being the first group to take the stand that at least part of the dunes region should be saved from destruction by commercialism and be conserved in its wild state as a playground for the people. This club, an organization of nature students and scientists, had made frequent excursions to the dunes, and the "Beach House," now a landmark on the lake front, was built by some of its members. This first agitation of which we find record dates back to 1912. It evidently found a responsive chord in many others, for both individuals and organizations made themselves heard on the subject and several newspaper write-ups appeared, helping the publicity. The movement received an impetus, doubtless, from the report that the finest part of the dunes region was to be invaded and the famous Mt. Tom sold for its sand and removed bodily, as had happened to the equally famous "Hoosier Slide," at Michigan City. In 1916 the Potawatomi Chapter of the D. A. R., at Gary, passed a resolution favoring the creation of a dunes park, and this seems to have been the first definite step taken by any Indiana organization. The Chapter did not stop with the passing of resolutions, but by way of further stimulation held its annual picnic at the Prairie Club House, this being followed, on July 16, 1916, by a large meeting held at Waverly Beach for the purpose of forming an organization to push the park idea. As a result of the meeting Mr. A. F. Knotts, the chairman, appointed a committee of fifteen, representing Illinois, Indiana and Michigan, to incorporate an organization under the name of The National Dunes Association. The American flag was hoisted on top of Mt. Tom, not far away, and the organizing was effected with A. F. Knotts as president and Mrs. Frank J. Sheehan as secretary.

The National Park Movement—The movement, having taken this coherent form, was favored and aided by the late Hon. Thomas Taggart, then United States senator from Indiana, who submitted to the senate a resolution looking to the purchase of a Lake Michigan dunes tract for a national park. This, in turn, brought about a meeting at Chicago, November 30, 1916, pursuant to a call issued by the Hon.

Stephen T. Mather, assistant secretary of the Interior. Indiana was well represented at this gathering. All told about 400 persons were present, and the published report of the speeches favorable to a park make a good-sized pamphlet. After this general hearing the project got so far as a recommendation from the Hon. Franklin K. Lane, Secretary of the Interior, that a tract approximating fifteen square miles be purchased. This would have secured most of the dunes stretch between Gary and Michigan City instead of the three and a quarter miles now possessed. Another notable demonstration in aid of the project was an elaborate pageant, written by Thomas Wood Stevens, based on historical material furnished by George A. Brennan, and presented under the auspices of The Dunes Pageant Association, back of which, in turn, were a number of clubs. This pageant, prepared on a grand scale, was held in the great bowl-shaped blowout that lies just west of Waverly Beach. There were several hundreds of actors in the performance, and these in the picturesque attires of various periods, made a colorful and lively showing. The attendance ran well up into the thousands, and the affair gave wide publicity to the park idea.

The State Park Movement—Up to this time the propaganda was all for a national park, and it looked as if the hopes of the advocates would be realized, but unfortunately the oncoming of the World War diverted the attention of Congress to affairs more urgent, and this, together with the fact that there existed no precedent for the purchase of federal park lands, are given as the chief causes of failure. At any rate the Federal Park plan failed. But the spirit of determination to keep the conservation idea alive only grew, and we next find the crusaders turning to the State of Indiana to save the dunes. In 1919 Governor James P. Goodrich and Richard Lieber, director of the Indiana Department of Conservation, took up the matter seriously. Governor Goodrich went out of office on January 1, 1921, but in his final message to the General Assembly he strongly approved the dunes project; and his successor, Governor McCray, in his inaugural address also advocated the purchase of the tract proposed. In the legislative session of 1921, the matter came before the lawmakers, Senators Robert L. Moorhead and Charles J. Buchanan being delegated as a

committee to visit the park site. These recommended the purchase of the land, and a bill to this end was introduced by Senator Buchanan that session, but it failed to pass. Early in the legislative session of 1923 a dunes park bill was introduced into each house, and in support of this action Mrs. Frank J. Sheehan, as chairman of the Dunes Park Committee of the Indiana Federation of Clubs, delivered a stereopticon lecture in the House of Representatives before an audience of legislators and their wives. The speaker held the floor for two hours with facts, arguments and pictures, and, more than that, held the interest. In urging the passage of the bill she emphasized the fact that delay was dangerous and that then was the time for action. When the park movement started, she said, there were fifteen miles of the dune lands; now there were only six, and the value of the ground was steadily increasing, while an added risk was the occupancy by cheap and undesirable resorts. Already there has been a narrow escape from a common road house on lands that should be dedicated to better uses. In this connection it is but just that Mrs. Sheehan's long and zealous activity in this cause should have special recognition. As far back as 1916 she was secretary of the National Dunes Park Association, and from that time till the consummation of the project her active interest was unflagging. Her name will always be associated with the Dunes Park as is that of Mrs. Juliet V. Strauss with Turkey Run, and Miss Drusilla L. Cravens with the Lanier Memorial Home in its rehabilitation.

The Law; Subsequent Steps—Mrs. Sheehan's presentation of the subject doubtless had its effect. At any rate a law was passed providing for the purchase of lands to be known as "Indiana Dunes State Park," and providing therefore a tax of two mills on each hundred dollars' worth of taxable property. Two thousand acres were authorized, to be located on the lake shore of Porter County. This provision was neither large nor speedy, and did not insure the purchase of lands that might at any time slip away to other purchasers, but it was at least a definite step in the desired direction. The project now lay fallow for some two years pending the accumulation of funds but finally the first actual purchase of land was made. It came about when in June, 1925, Governor Jackson came to Gary with Mr. Lieber, in order to form his own opinions.

The party was met by Mr. W. P. Gleason, of whose invaluable help more will be said later. Mr. Gleason explained the existing situation as to available lands and their value. The next day was devoted to a thorough inspection of the dune lands. So greatly was Governor Jackson impressed by what he saw that he wished at once to begin with the purchase of land, regretting only that someone had not done this twenty-five years earlier. In this manner came about the first purchase of land through the acquisition of Mt. Tom (one of the great dunes), the property of Mr. John O. Bowers, containing 110 acres. The deed bore the date of August 29, 1925. In the meantime a member of the Conservation Commission, Colonel Everett L. Gardner, had been named agent for the Dunes Purchasing Board. This body consisted of the Conservation Commission, to which were added by legislative action a member from the Senate and one from the House of Representatives. Successively the Senate was represented by Lieutenant Governor Branch and Senator T. A. Gottschalk, the House by Hon. T. A. Gottschalk and Mr. Sam J. Farrell.

Great thanks are also due to Attorney General Arthur L. Gilliom, whose legal guidance and personal interest helped largely to conclude the final purchase of the so-called Wells tract, consisting of almost half the territory.

In December of that year a deal was closed for 334 acres lying at what is now the west end of the park, at \$368.75 per acre, \$25,050 in addition being paid for existing improvements. These included the spacious concrete parking place on the Waverly Beach road, and ninety-two leases on houses and tracts, these leases after January 1, 1926, to return revenues to the state till their expirations.

Gift of the Illinois Steel Company; Other Acquisitions—

Soon after these purchases the information was given out to the newspapers that gifts of money to the amount of \$300,000 had been promised for the park, and a few months later Governor Jackson made public the following communication from Judge Elbert H. Gary, president of the United States Steel Corporation, of the city of Gary:

“Our corporation has decided to contribute \$250,000 toward the purchase of the land for the Dunes Park in northern Indiana, payable at such times as you may actually need the same in order to complete purchase agreed upon and now held

under option. I understand you require immediately about \$135,000, and a check and voucher for the same are herewith inclosed. I hope our subscription will be effectually used to influence other outsiders to subscribe liberally."

In its acknowledgment of this munificence the Department of Conservation must again express its deep appreciation of the signal service rendered by Mr. W. P. Gleason, general superintendent of the Illinois Steel Company at Gary, who, representing Judge Gary, was a strong influence in determining the gift. Mr. Gleason had been an active promoter of parks in Gary, while his long incumbency as president of the National Dunes Park Association bespoke his ardent interest in that project. In October, 1925, he put before Judge Gary, the head of the above mentioned steel corporation, a full statement of the Dunes Park situation and solicited a donation toward the purchase of the desired tract. The result of this was the brief but meaningful letter from Judge Gary above quoted.

These gifts, together with accumulated funds from the tax levy, gave the state about a half million dollars for the dunes purchases, and the Department of Conservation was prepared to push forward the acquisition of lands. Among the holdings desired were the estate of the Thomas E. Wells heirs, consisting of 1,013.88 acres, and a tract of 55.97 acres having a half mile of lake frontage, owned by the Chicago Prairie Club. For some of this land it looked for a time as if condemnation proceedings would have to be instituted, but finally the entire amount authorized by the law was acquired by negotiation at reasonable prices. The total cost of the Dunes Park lands was approximately \$1,000,000.

Park Improvements; the Insull Gift—During the process of acquiring the needful acreage only minor improvements could be made to serve the increasing number of visitors. The Duneside Inn, a farm-house converted into a home-like hostelry, was enlarged to take care of the growing demands for accommodation. Trails were made so that visitors could gain access to all parts of the park, and by the fall of 1929 the erection of the pavilion and enlargement of the contiguous parking space added considerably to the service area, while for the greater safety of the park a fire tower was placed on the summit of Mt. Jackson. Also the "State Cottage," in-

tended as a summer home for our governors, was put in good order. At the present time plans are under consideration for a unique building project calling for a concentrated cottage system. This structure, it is expected, will be placed in the small blowout to the right of the Waverly pavement and facing the beach.

When the park land had been acquired by the various steps necessary and plans were worked out for development of the service area the whole scheme was handicapped by the difficulties of access from the main artery of travel. Between this artery (the Dunes Highway) and the southern park boundary there intervened a strip of territory six-tenths of a mile in length, the only thoroughfare that crossed it being a road from Tremont station, and which led to the beach terminus by a roundabout way of long and awkward angles. The prime desideratum was a direct entrance to the service area from the highway, but the land necessary for it had reached a market value quite impossible for the Department. With this serious situation facing the state, there came to its rescue Mr. Samuel Insull, Jr., and his associates with the generous offer to donate a strip of land 500 feet in width and extending from the South Shore Electric Railway to the Park, six-tenths of a mile in length, as a fitting park entrance. The building of this direct entrance from the Dunes Highway to the beach and the service center will be one of the major projects of next year.

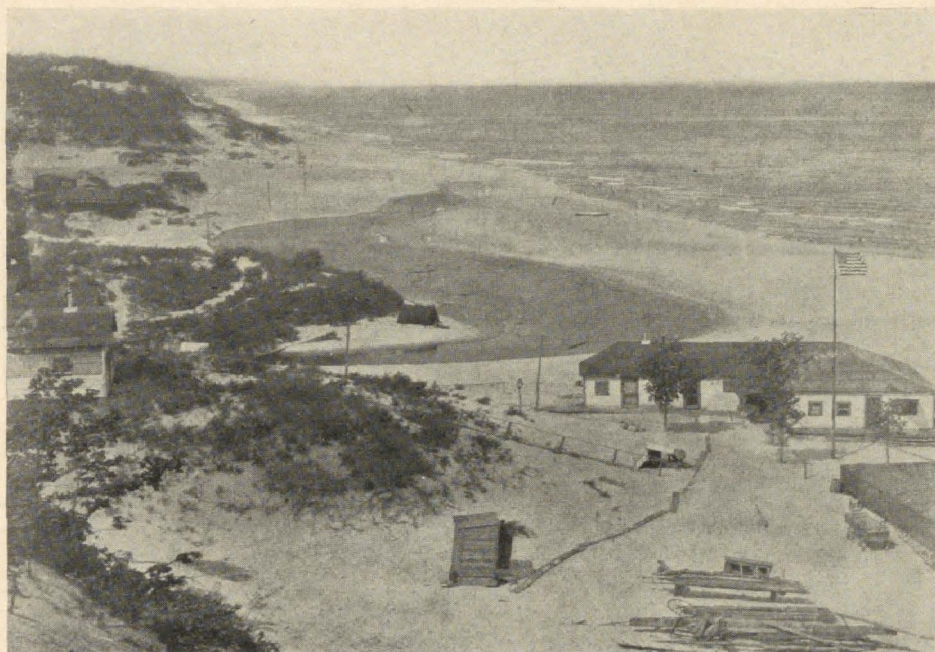
Also through a personal gift, Mr. Samuel Insull, Jr., made it possible to carry the heavy cables to supply the electric needs to the service Area underground, thereby eliminating unsightly and dangerous overhead wires.



Waverly Beach, Looking Eastward, in 1927



Same View in 1930, Showing Parking Space



Waverly Beach, Looking Westward, in 1927, Showing Dunes Creek



Same View in 1930. Dunes Creek Under Cover

Regional History

It has been implied in the beginning of this brochure that the current of life which today sweeps to and fro around the end of Lake Michigan is but history repeating itself in a modern form, and that the causes of it inhere in the natural relations that exist between two great sections of the country, and of the geography of the country as modified by the southward thrust of the great lake which thus determines the trend of land routes.

Indian Trails—In the library of the Chicago Historical Society is a collection of unpublished maps made by Mr. Albert F. Scharf, who has given much study to the aboriginal trails of what has come to be known as the "Chicago Area." Some of these charts cover the Indiana dunes belt, showing ancient lines of travel and other features that have long since disappeared. By them it may be seen that where are now railroads, electric lines and automobile highways there was once a system of Indian trails consisting of what seems to have been three trunk lines multiplied by diverging ones that crisscrossed the country. One of these branches led down Dune or Fort Creek to what is now Waverly Beach; another sought the lake front by cutting through the dunes where the present Trail 10 runs, and one was the forerunner of our Dunes Highway and the electric railway. A little farther south was the great Sauk trail, from the Illinois country to Detroit. Trail Creek, which determined the location of Michigan City, derived its name from the trails that touched the lake there.

Inter-tribal Relations—The meaning of these wilderness highways is explained by the customs of the people who made them. The Indian by no means led a continuously isolated existence in his chosen locality. Like the white man who followed him he had intercourse with others of his kind. War, councils, commerce and hunting were all reasons for traveling to and fro by the tribes. The Iroquoise of central New York, says one authority, were familiar with the country as far west as the Black Hills of Dakota, and it is recorded that a body of these savages, in 1721, came all the way to Wisconsin to attack the tribe of the Foxes, who had offended them. This

battle was but one of many between the tribes of the West and the East, and there are traditions of fierce war parties on their forays threading the Indiana dunes where now the peaceful tourist hikes his way.

The First White Man—Just how and when man began to figure in the history of the Lake Michigan dunes is more or less a matter of speculation but it can hardly be doubted that they were discovered and examined by the early French explorers in their quests for the shortest and easiest routes between the Great Lakes and the Mississippi River. One of these routes was by the St. Joseph and Kankakee rivers; another was by the Chicago and Illinois rivers, these two ways lying on either side of the lake's great southern bend. That part of the shore that intervened between them was the dunes region. Brennan in his book, "The Wonders of the Dunes," asserts that the French missionaries, Fathers Allouez, Dablon and Marquette all visited the place, and that the last-named "camped on the shores of the Calumet, Fort (now Dunes) Creek, Trail Creek, St. Joe and others." In the literature of the dunes there are repeated references to a small military post, called "Petite Fort," which is said to have been located on a sand hill on the banks of Fort Creek, not far from the present Waverly Beach. Authentic information about this fort is meagre, but there seems to be pretty good evidence that it existed as a post during the French occupancy of the country. Brennan says it was built about 1750 or 1755 and was abandoned in 1780. This writer has gathered into his pages considerable historical lore of the region including accounts of sanguinary conflicts between both Indians and whites. After George Rogers Clark's decisive victories at Kaskaska and Vincennes his plans for a more sweeping conquest extended to Detroit and such other English posts as might contribute to the support of that objective. As the reader of history knows, however, the scheme for capturing Detroit came to nothing, but nevertheless things were made lively in the lake region by emissaries, both American and British, seeking alliance among the Indians, and by occasional minor conflicts. A notable episode was the intrusion of the Spaniards into the hostilities by an expedition from the Spanish territory beyond the Mississippi against the English post of St. Joseph, on the southeastern shore of Lake Michigan. The post was captured, held twenty-four hours (to establish

squatters rights, presumably) and then the captain of the foray complacently drew up a document which presented to the king of Spain a large portion of the region that General Clark had already appropriated for Virginia. Truly, the transferring of real estate in those days was quick, easy and generous to a degree. On the strength of this exploit Spain put in her claim at the treaty of Paris, following the Revolutionary War, but convinced nobody, and it is a stretching of the fancy to say that this region was for a time under the Spanish flag, as some like to say.

Early Steps Toward Occupancy—The first step taken by the United States government to occupy this region as a national possession was in 1795 when Anthony Wayne, after a successful war against the Indian tribes of the Northwest, secured by treaty a number of key positions controlling certain waterways as transportation routes between different parts of the western country. One of these positions was the mouth of the Chicago River, and the stipulation of the treaty was for a tract six miles square at that point. Another tract twelve miles square, where the Illinois River joins the Mississippi strengthened the protection of that portage. Wayne's treaty also stipulated that the people of the United States should be allowed free passage by land and water to the Indian country along the lines of travel connecting the reservations that had been secured, and thus the way was opened for the white man's roads to succeed the red man's trails. The Chicago portage was strengthened in 1803 by the erection of Fort Dearborn at the mouth of Chicago River, thus establishing a protecting military post on what was then regarded as the very frontier of the far west. Still it was the Indian's country and destined to remain so for some years. As allies of England in the war of 1812 they annihilated Fort Dearborn and the little settlement that had grown up around it, perpetrating one of the most atrocious massacres of the war. When England lost the war her savage allies also lost, and their chances for retaining the country grew steadily less. In 1816 the fort at Chicago was rebuilt and a strip of land secured which reached from Lake Michigan to the Illinois River along both sides of the Chicago River, the object being to connect the waters of the lake and the Mississippi by a canal, thus improving the natural portage that existed there.

Race Succeeds to Race—The acquiring of lands from the Indian tribes by treaties went steadily on, reaching farther and farther northward until by 1832 the government had possessed itself of the whole of Indiana barring a few minor reserves in the Wabash valley. By that time the tide of immigration was setting strongly toward the new west and northwest, and this was stimulated when, in 1833, another treaty, held with the Potawatomi, Chippewas and Ottawas, at Chicago, extinguished all the Indian claims in Illinois, the tribes to be removed elsewhere.*

This year 1833 may be regarded as the point of division between the Indian occupancy and the white man's regime, for though the latter had injected himself into the history of the region much earlier he now had for the first time a clear field for his operations.

BOOM DAYS

On the heels of the treaty Chicago, a frontier village, was incorporated as a town, in celebration of which event, and in true accordance with the white man's idea of glorious progress, a boom was launched and speculation ran riot until the historic panic of 1837 put a stop to it. Nor, to quote M. M. Quaife, who has written on this subject, was the speculative craze confined to Chicago. He says: "All around the shores of Lake Michigan, on every inlet and creek, and for scores of miles inland, town sites were platted with enthusiastic zeal, and lots in them were bartered with eager abandon at ever-mounting prices." This epidemic of extravagant hopes duly invaded the Indiana dunes region. From John Tipton's viewpoint, as we have already seen, the sand piles and swamps composing it promised little for any of the purposes of civilization—its destiny seemed to be that of a wild no-man's land where Indians and wild beasts might linger after they were driven from the settled country. It lent itself neither to agriculture nor urban occupation. Still, there on either hand was the East and the West with potential commercial relations that meant untold fortunes for those who grasped the opportunities. The old Indian foot-paths were

*It was at this treaty that Leopold Pokagon, a chief of the Potawatomi tribe, constrained by circumstances, reluctantly signed away a million acres of land where Chicago now stands. The purchase price was about three cents per acre, and even that was not paid in full till urged by Simon Pokagon, a son and succeeding chief, nearly sixty years after the treaty.

turning to stage routes connecting Chicago with Detroit, with Toledo, and with the East. The home-seeking immigrants were coming by land and by water in steadily increasing streams, and there was Chicago, seated by her lake harbor, growing like a mushroom. If Chicago why not other harbor sites?

THE BOOM IN INDIANA

Michigan City—The congressional act of 1816, which enabled Indiana to become a state set her Michigan boundary ten miles north of the line as originally fixed, thus making it possible for her to have lake ports. Within the territory so added the mouths of Trail Creek, of Fort Creek and of the Grand Calumet River gave promise of harbors if properly developed. The first to act upon this faith were the founders of Michigan City, on Trail Creek. Statements vary as to the exact date of beginning, but T. A. Ball, a historian of the region, says the town plat was recorded in 1833. This settlement expected to be quite as important as Chicago across the lake, and indeed, according to Mr. Ball, it made a start that seemed to justify its aspirations. The growth for the first two or three years, he says, "was perfectly astonishing. Stores were opened, warehouses were built, piers constructed, schooners and even little steamers landed cargoes, and business was brisk." Unfortunately the natural forces that played fast and loose with the sands about the south end of Lake Michigan were no respectors of human hopes and of harbors. Michigan City depended on a good harbor as the principal factor in her prosperity, and the making and maintaining of such an improvement cost so much money that a new little town could not hope to manage it without the aid of federal appropriations. Between the years 1836 and 1852 Congress allowed money to the amount of \$160,733, but that was by no means sufficient, and Chamberlain's Gazetteer of 1850 states that while the city of that date was provided amply with warehouses and stores, and more than 2,000 acres had been laid out in town lots the harbor facilities were so poor that vessels were loaded and unloaded from lighters, and then only in pleasant weather. "The losses by the owners of lots alone," says the writer, "were no doubt fourfold the expense of the making of a harbor, and to the public the loss of wealth and capital, and in facilities for business is very large."

Nevertheless, as we are told elsewhere, "from 1837 to 1844 Michigan City was the principal grain market for northern Indiana, wheat being received from as far south as the central portion of the state. Huge caravans of ox-teams with two and three yoke of oxen to a wagon would come in, sometimes thirty or forty such teams together. * * * The same teams which conveyed the wheat to market would return laden with goods for the home merchants. It was not uncommon for three hundred teams to arrive in one day."* The Michigan Road, which bisected the state, running from Madison on the Ohio River to Michigan City, contributed its part to the thriving business above specified. After an interval of fourteen years during which there were no federal appropriations the Michigan City people put their own shoulders to the wheel by organizing the "Michigan Harbor Company," and began raising money. Then Congress helped again and by 1873 a total of more than a half million dollars had been spent on harbor improvements. Today it is the one public lake port lying within Indiana, with a population a little short of 27,000.

Indiana City—Another name that appears on the old maps of Lake County is that of Indiana City, located where the Grand Calumet joins the waters of the lake. Local historians seem to be in doubt whether this place was ever more than a "paper town," but some say that a few houses were built there. At any rate it is agreed that the Indiana City attempt was the result of a vigorous boom based on the claim that the Grand Calumet with a little dredging would make a better harbor than any other river at the south end of the lake. Quite a little money is said to have been invested there, but the panic of 1837 was the finish of the venture. Its site is now occupied by Miller, just east of Gary.

City West—A third attempt to beat Chicago at her own game was the founding of City West, near the mouth of Fort Creek. This is the present-day Dunes Creek that drains the swamps back of the sand-hills into the lake at Waverly Beach, near the west end of the state park. It requires a somewhat violent stretching of the imagination to figure out how the mouth of this brook could be fashioned into a harbor without manufacturing one in toto, but it seems that one feature of

*T. H. Ball's *Northwestern Indiana*, p. 348.)

the proposed scheme was a canal that should connect the waters of the creek and lake with those of the Little Calumet River, some three miles to the south.

City West was as ambitious as its name indicated. It disappeared utterly so long since that its brief history is now all but forgotten, but T. H. Ball in his "Northwestern Indiana" gives an account of it which may be accepted as authentic, as it is, in part at least, his personal recollections. He says:

"In the year 1836, four men,—Morse,—Hobart,—Bigelow and L. Bradley, adventurers in the better sense of that word, having some means at their command, selected the mouth of Fort Creek, in Porter County, on the shore of Lake Michigan, about ten miles west from Michigan City, and about the same distance from Indiana City, in Lake County, as an inviting place for founding a city that might compete with the then young Chicago and the still younger Michigan City, in securing the yet undeveloped commerce of Lake Michigan. Of loaded freight trains on railroads they seem to have scarcely dreamed. The selection was not badly made. The sand bluffs along that portion of the beach were large and grand. Fort Creek entered the lake along a bed nearly parallel for a little way with the lake shore. It was not a large stream of water, but it was not far southward to the Calumet River, which it was designed to connect with Fort Creek by means of a canal. Actual surveys and soundings made in 1837 indicated that the natural advantages for a harbor were superior there to the locality chosen for Michigan City. In the fall of 1836 and the winter following quite a portion of land was laid out in city lots, Hervey Ball, from Massachusetts, looking for a location in the West, acting as surveyor and civil engineer. A sawmill was erected by one of the company, probably Morse, a dam having been placed across the creek; buildings were erected, the large pine trees that grew on the bluffs, and other varieties of timber growing on the level and low lands, furnishing an abundance of good lumber, and village life commenced there.

"When the spring of 1837 opened the place began to grow rapidly as a new western town. Commodious and quite costly houses were erected; a large building was put up for a store and warehouse; hotels were built, a survey for a harbor was made, and an appropriation from Congress was expected to enable the proprietors to perform the needful work, and everything for a time promised abundant success. The sawmill furnished a good supply of lumber, and the carpenters were busy putting the lumber into the form of houses.

"There came from Massachusetts in the spring the two families of Hervey Ball and Amsi L. Ainsworth; other families

came in, and quite a little community was formed. * * * In all there must have been some sixteen, possibly twenty, families.”*

Mr. Ball gives us still further glimpses of the place. In 1837 he lived there seven months as a boy and accumulated piquant memories of life in the village with its romantic tang. Although the Indians had sold the last of their lands four years before, many of them lingered about the dunes, and frequently picturesque cavalcades of them, men, women and children, rode through the settlement, bound to or from Joseph Bailly's trading post, a short distance further west, or to an Indian cemetery that lay on a knoll of sand between the village and the lake. Brennan says that the village had no less than three hotels, and this would indicate that of the tide of travel that passed around the lake's end a good deal must have come by the lake shore and through the dunes. In fact it is stated that up to 1837 the road from Michigan City to Chicago most traveled was the beach, but about that time it was abandoned in favor of one on the other side of the dunes. All these routes were primitive to a superlative degree and a number of travelers who came journeying westward for a glimpse of the country have left accounts of stirring adventures by flood and field. Among the celebrities were Harriet Martineau, the English writer, and Charles Fenno Hoffman, one of the early American literati, and both of these mention the lake shore routes. Neither of them speak of City West, but at least one famous person honored the place with a visit, according to Mr. Ball, who leaves us this account:

“One morning the usual quiet life of the community was broken by the announcement that Daniel Webster was about to enter City West in a two-horse carriage, having turned aside from the stage road to visit our little growing city. Of course the Whig portion of the community was quite excited. A breakfast as the citizens had gathered near the house the great ‘exnounder of the Constitution’ came out to be introduced to the inhabitants of City West. There he stood before us, the great lawyer, statesman and orator, tall in form, massive in intellect, the man of whom we had heard and read but whom we had not expected to see standing upon our sandy soil. He soon took his seat again in the coach and passed out from us on to Michigan City.”

*One of the Scharf maps above referred to includes City West and aims to indicate the exact location of each building.

Concerning the end of City West Mr. Ball says:

"This pleasantly situated little town never became a city except in name. It was two or three years too late in starting. The financial crash of 1837 that swept over the country did not spare even this little place. Congress made an appropriation for a harbor, although Daniel Webster had taken breakfast there. It would take money to stock the large storehouse with goods, money to dig the contemplated canal from the Calumet to the lake, money to make a city; and the proprietors were not millionaires. They had built fine dwelling houses, they had spent thousands of dollars, they had secured nothing that would bring in an income. They must give up their enterprise. They began to scatter. Before 1837 had ended some sought new beginnings elsewhere. Others followed the same example in 1838. Some went further west, some found homes in Laporte County, some in Lake; some went further from the lake into Porter County, and in 1839 few if any were left in the once promising little city.

"In 1840, in company with a young friend, I visited the place, mainly to obtain wild fruit. Toward nightfall we drove into the village. The houses were there but no inhabitants. We called at the large Exchange Hotel, but no one came to welcome us or attend to our wants. We had come prepared for that. We had our choice not only of rooms but of houses for the night. We chose a house, prepared our supper and arranged our lodging-place, with no fear of being disturbed. The next day we gathered our fruit, bathed in Lake Michigan, and went out from that solitude. The next that we heard about the unfortunate City West was a report that a fire had swept over it and that all the houses had gone into ashes."

Mrs. Sarah J. Stone told Mr. Ball that she, when a young girl, had also visited the deserted village in the dunes and that one of the houses she counted twenty-two rooms and closets.

After the passing of City West another village sprang up which became known as "New City West." It stood about where Tremont Station, on the electric railroad, now is, and, according to Brennan, flourished between 1845 and 1875. During the 'sixties Waverly Beach figured as a shipping point for lumber that was cut out of the swampy region lying back of the sand hills, to facilitate which a pier about 600 feet long ran into the lake. This pier rotted away after its day of usefulness, but traces of it may be still found, so it is said.

Miscellaneous Features

The Bailly Trading Post—In the chronicles of the Dunes region we find frequent mention of the old Bailly trading postpost which stood on the Little Calumet River some three or four miles west of the present state park. Miss Frances Howe, a granddaughter of Joseph Bailly, has left a very interesting record of this old French family, which in its character, is a relic of the ancient French occupancy.

"The Story of a French Homestead in the Old Northwest" the book is called, and in intimate fashion it quaintly tells how the founder of the home, an educated man of Canadian birth, came hither with his Indian wife and children about 1822 and established himself in a part of the Indian country where game still abounded and which was a promising fur center. He was already well and widely known as a trader, having previously been in the business at Macinac Island and elsewhere in Michigan. He not only sustained business relations with the Indians but also won their attachment by his interest in their spiritual welfare, he being an ardent Catholic. He had three or four daughters, all well educated and noted for their beauty and sprightliness, and the home was unique as a culture spot in an otherwise unsettled wilderness. The residence was quite fine for the time and place, being a two-and-a-half story structure of hewn white oak timbers, with porches and balconies. It was furnished fittingly, with a library of good books as part of the household equipment, and what part the books played in the daily program may be gathered from this pleasing glimpse given by Miss Howe:

"In the homestead the evenings were devoted to some form of instruction. The family spent their evening hours as all well-bred families of that period did. The ladies were employed in needle work, while grandfather read aloud or taught the children. The servants, French or Indian, gathered around the huge fireplace in their own separate quarters, sung their ditties and told tales. Sometimes they were called into the family sitting-room to listen to simple lectures on geography or to receive instruction regarding the approaching feast or fast."

The daughters of the house had all been sent away to school to acquire a formal education, and in addition to their cultural training they mastered the robust arts appropriate to life in the backwoods, among them that of horsemanship. Miss Howe tells of her mother in an emergency making a galloping journey all the way to Chicago through territory "beset with criminals, Indians and wild animals," to head off a man who had threatened legal steps against her father in the matter of a piece of property.

Aside from its publicity as a trading post the Bailly home was well-known to travelers to and from Chicago, for it was on a line of travel which, at first, one of the main Indian trails, became later a United States mail route for horseback travel, and then a rude wagon road over which people came by stage. Thus there were frequent opportunities for exercise of the Bailly hospitalities, even though theirs was not a public house, and for those hospitalities they were noted in a day when good accommodations for travelers were few and far between.

Bailly was a man of much influence with the Indians, and so concerned was he for their spiritual welfare that he erected a small chapel for religious services for them as well as for his own household. He also translated the New Testament into the Potawatomi language. On one occasion he and his wife averted serious trouble which might have become a massacre with a band of them who deeply resented an insult to some of their young girls by white boys of the neighborhood. Concerning the Indian life and ways Miss Howe speaks of the old trail that ran past their house, "a deep, wide rut made by centuries of pacing feet." The warriors when traveling this in single file procession always made a striking spectacle, and one of these "brilliant arrays of savage glory" is described in the Howe book as told by the author's mother. The occasion was the passing of several of the western tribes on their way to some general meeting near Detroit, "all arrayed as if for battle." Says the narrative:

"First came the Menominees, then the Winnebagoes, then the Foxes, divided according to their totems and attired in all their bravery. The single file passed on in perfect silence and unbroken order, not one looking either to the right or left; with one uniform stride, not varying one inch one from another.

"This part of the procession the family viewed from the veranda without the slightest fear, but when the servant whispered to grandfather: "This is the last band of Foxes; the Dacotahs are next, the ladies stepped quietly into the house, where the shutters in the lower story were already closed and bolted. The window shades of threaded rushes in the second story were lowered, and the muslin curtains were drawn, for the Dacotahs, as the Sacs and Sioux were called by other Indians, were tribes that did not respect women. In this they differed from the eastern Indians, who might murder women but never wronged them.

"The Dacotahs, however, forced the grandest part of the pageant; their paint was more brilliant, the war bonnets more expansive, and the display of arms unique. Feminine curiosity peered through the crevices in the window shades at the fine stalwart figures of tall, lithe, athletic warriors of most commanding appearance. Each warrior's blanket, passing under his arm and over the shoulder of the other arm, was fastened together by a showy piece of burnished silver. Bows and arrows hung at their backs, one hand grasped a bunch of javelins, and the other balanced a rifle slung over the shoulder.

"When the last Dacotah had crossed the river and disappeared in the oak woods there was a sense of profound relief felt by all who had seen the broken lines of warriors of all these tribes."

Joseph Bailly died in 1835. After the death of his granddaughter, Miss Howe, in 1918, the home came into the possession of the Sisters of Notre Dame, and it still stands as a relic of the old French regime and an object of interest to visitors.

The Ten-Mile Strip—The regional history of the Indiana dunes country would not be complete without a specific consideration of that part of the state which may be called the Ten-Mile Strip, meaning thereby a tract of that width abutting on Michigan and extending across the northern end of Indiana. Historically, it is of itself a unit, and the story of it involves a contribution to the standing of Hoosierdom that is of no small importance. An admirable presentation of the subject is a monograph by Mrs. Frank J. Sheehan, of Gary,* and to this I refer the reader who may be interested in a more detailed account based on research work.

To get an intelligent view of the situation we must go back to the Ordinance of 1787, which was framed for the government of the territory northwest of the Ohio River. That early

*See Indiana Historical Society publication, Vol 8, No. 6.

it was not known what exact number of states would be found desirable in the ultimate division of the territory, but it was fixed by the ordinance at not less than three nor more than five, and boundaries were fixed dividing the territory into thirds, running from the Ohio River to Canada. These divisions were the same as now bound Illinois, Indiana and Ohio, except on the north. This north boundary was left undecided, with the proviso that if Congress should later find it expedient it should "have authority to form one or two states in that part of the said territory which lies north of an east and west line drawn through the southerly bend or extreme of Lake Michigan. Till reasons arose for controverting it, this was naturally construed to mean that the line as thus specified by the ordinance should be the dividing boundary between the three southern states of the group and any that might be erected northward of them. The question might well be raised as to the fairness or intelligence of a law that proposed to give one or two states the monopoly of a great waterway to the entire exclusion of two others, for it meant that Indiana and Illinois could have no port on Lake Michigan. In a day when water transportation was a very important commercial factor this was no small matter. The first contention arose when Ohio became a state, in 1802. The mouth of the Maumee River, at the west end of Lake Erie, where the city of Toledo now is, and where a town was then starting, was much desired by Ohio. At that time the exact latitude of the southern extremity of Lake Michigan was not determined. If the east and west line from that point struck north of the "Miami River of the lake" (the Maumee was then so called), well and good, so far as Ohio was concerned. If, on the contrary, it was to the south, so as to throw the place in question outside of the new state, then it was not agreed to, and in the Ohio Constitution the disagreement was set forth in no uncertain terms. Since the latitude of the line was not settled, and the territory to the north not yet separately organized, nothing immediate was done about it, and Ohio continued to regard the river mouth and the future city of Toledo as her own.

Then, in 1805, Michigan Territory was formed, and the federal law creating it included in it all the country lying north of the ordinance line in question. This gave grounds

for contesting Ohio's claim to the Maumee harbor and settlement, especially when it was finally established that Toledo lay north of the ordinance line. Michigan protested vigorously, and, to shorten this part of the story, there ensued between these two, a prolonged conflict, which rose at one time to military demonstration, and which came to be known in a half satirical way, as the "Toledo War." In the end Ohio got Toledo and the Maumee.

Indiana's intrusion into the boundary question came in 1816, when the federal enabling act, authorizing the territory to frame a constitution and become a state, fixed the northern boundary as an east and west line drawn through a point ten miles north of the southern extreme of Lake Michigan. By just what process that change from the ordinance line came to be made no one seems to know to this day. Jonathan Jennings, Indiana's territorial delegate in Congress and the chairman of the committee that framed the enabling act, has been regarded by some as the principal cause, which is not unlikely.

This second encroachment on her preserves did not, of course, pass without opposition from Michigan. It never reached the acute stage of the quarrel with Ohio, but the unsettled question dragged along for years, with occasional attempts on the part of the territory to the north to stir up the matter in Congress. Arguments pro and con pivoted upon the meaning of the ordinance of 1787, when it authorized Congress to "form one or two states in that part of the said territory which lies north of an east and west line drawn through the southerly bend or extreme of Lake Michigan." The meaning of that was clear enough, Michigan thought—it carried her territory down to the line specified; but Indiana's champions maintained that the power to form new states in the territory meant the right to include so much of the territory as Congress might see fit. It did not of necessity imply that all the territory must be included. Whether logic or sheer persistence finally won the day might be a mooted question. What happened was that when Michigan became one of the United States, in 1837, she was offered what is now called the Upper Peninsula in exchange for what had been taken from her southern border, and after some stormy politics this compromise was accepted. A unique development

of the preceding contention was that Michigan Territory, denied her petition to be made a state by regular process, made herself a state without federal sanction, in 1835, and for fourteen months actually existed as such, without being a member of the Union. Of course, all this was too irregular a procedure to be more than a passing demonstration, and in 1837, as above implied, we find her entering the federation in more orderly fashion, being ushered in by the customary "enabling act." Also, with her compromise acceptance of the Upper Peninsula the southern boundary question was finally laid to rest, Indiana gaining access to the great navigable lake and the waters of the whole St. Lawrence system.

Had it turned out otherwise the loss to us would have been not only such access to the great water routes, but a vastly important part of that immense industrial growth that has taken possession of the Calumet region. Also, to quote from Mrs. Sheehan's brochure already referred to, "we would have lost the beautiful farming area and the populous district including Elkhart, South Bend, Mishawaka, Lagrange and Angola. The state prison would not have been located at Michigan City; we would have been deprived of the attractive lake region in our northeastern corner, and Indiana would never have possessed the Dunes or Pokagon state parks."

THE CALUMET REGION

Reasons for Urban Growth—In the beginning of this brochure reference was made to the inherent geographical and social reasons why the country at the south end of Lake Michigan should become an important focus for human activities. It was naturally a converging point between two great sections of the continent, the convenient utilizing of which followed logically from intercourse between those sections. This was illustrated by the system of Indian trails that threaded the region before the present race came, by the white man's transportation routes at a later time, and by the early "booming" mania that has already been described. Much of that booming of nearly a century ago seems utterly extravagant, and yet the wildest dreams of those early visionaries sink into insignificance when compared with what has actually come to pass. Chicago, the fortunate aspirant, fatal to the chances of

the others, has become the second largest center in the United States, one of the great cities of the world, and the dominating metropolis of a great state. With its more than three million inhabitants it has grown the better part of thirty miles along the lake front and spread eastward to the Indiana state line, where it automatically must cease as an Illinois city and a governmental unit. With this restriction in one direction, however, the forces that have made the growth have not ceased—indeed they have been stimulated anew, for reasons that will be mentioned later.

The "Calumet Region"—What is known as the Calumet Region of Indiana is, in one sense, a prolongation of Chicago, extending from the state boundary eastward along the lake shore and across the north end of Lake County. The area so called takes its name from the Grand and Little Calumet rivers which supplement the advantages of the lake front with a unique water system. The double stream designated by the two names, "Grand" and "Little," is properly but one river. It rises in LaPorte County, flows westwardly across Porter and Lake Counties into Cook County, Illinois, paralleling the lake shore. Then it doubles on itself and, as the Grand Calumet, flows back eastward, still nearer to the lake, to a point near the east boundary of Gary. This waterway has so little current that it is more like a canal, or, rather two canals, and is further distinguished by having two mouths, there being two connections with the lake, some ten miles apart. The surrounding lands being low and subject to flooding in earlier days, high water greatly increased the water surface of the region (before there was a drainage system) and to this was added a ganglion of three small lakes lying near the state line.

This over-abundance of water has been measureably corrected now, but when in its wild state the locality was a favorite haunt of water fowl and wild game of various kinds, what with the forests, swamps, waters and growths of wild rice and other vegetation to entice them. Deer were killed there as late as the 'seventies, and we are told of wild swans and pelicans being shot.

The Tolleston Feud—This sportsman's paradise furnished a dramatic little chapter to Lake County history. A number of wealthy Chicago men secured control of several thousand

acres extending for six miles along the Little Calumet, and lying, much of it, within the present limits of Gary. It took the name of the Tolleston Gun Club,* and here it proposed to enjoy its preserves in the true manorial style of old England, the monopolized area being forbidden the rest of the world. Unfortunately for the peace of the club the natives of the surrounding country had always regarded this waste region as a no-man's land, and many of them made their living there as hunters and trappers. When it was deliberately taken possession of and trespassers warned off they kept on hunting and trapping as before. This called for guards or game-keepers on the part of the club, whose business it was forcibly to keep off poachers, and the result was a long-standing feud, punctuated with acts of violence and a few actual murders, to say nothing of much litigation.

Passing of the Old Order—Until the founding of Gary, in 1906, the area where that city stands was a noted resort for hunters, but the old order was passing, and destined to swift and radical changes. When expanding Chicago crowded down on these waste lands of sand hills and swamps it was discovered that there were various factors which made the locality a land of industrial promise. The acreage at that time was cheap; it was a focussing place for a number of railroads that entered Chicago from the East; water facilities for transportation were of great commercial value, and here was not only the lake front but the Calumet water system lying contiguous to it which with improvement would offer extensive dockage and many additional miles of water frontage. Moreover this location at the southern extremity of the Great Lakes system was particularly advantageous for certain industries, especially steel manufacture, by reason of its lying between raw material on the north and coal supplies on the south, transportation of which figured importantly in manufacturing costs. Still another inducement to large industrial plants was a riparian law of Indiana which permitted holders of public water frontage to extend the same into the water and hold title to the built-up lands.*

*Tolleston was one of the early settlements and took its name from a German named Tolle.

*The riparian law of February 24, 1899, gives the right to build private "piers, wharves, docks or harbors in aid of navigation and commerce, and use, occupy and enjoy the same as extended into said navigable waters, as appurtenant to said land so bordering upon said navigable waters."

Whether or no this is a complete summary of influences, sufficient to account for the wonderful urban growth of the Calumet country, that growth has come to pass and is one of the industrial marvels of the age, in its extent, in the swift-ness of its development, and in the probabilities of its future. Beginning with the Standard Oil Company plant at Whiting one great industry after another took possession of the region till today the industrial belt stretches across the sixteen-mile width of Lake County, and the stranger passing through that area is astonished by the number of towering chimneys that loom against the sky far and near. These represent at least half-a-dozen separate plants engaged in the making or working of steel,* three huge oil refineries, a great Portland cement mill, and other manufacturing businesses. By no means least of these activities is the generation of electricity to furnish power and light, not only for this region but far beyond its boundaries. The plants here are part of a system that furnishes power from northern Wisconsin to Pennsylvania and West Virginia.

Harbor Improvements—As said above, the Calumet country offered to industries not only lake front advantages for harbors and dockage, but the peculiar river system offered an extension of these advantages with some artificial improvements. The main improvement thus far made is the Indiana Harbor Ship Canal, a great ditch from 200 to 300 feet wide and 23 feet deep, connecting the lake, with the Grand Calumet and having a branch that gives access to Hammond. Built twenty-five years ago it affords frontage to mills, factories, foundaries and refineries which may be reached by the largest lake boats, and in time, it is predicted, ocean vessels from all parts of the world will find their way to these inland points. Indiana Harbor, at the mouth of the canal, is reported to be one of the greatest oil-exporting ports in the nation—which probably means in the world.

Interlocking Corporations—The urban segregations of the Calumet region are something unique. Instead of each being surrounded by rural territory in which to grow they come up against one another hard and fast, and the corporations are

*Says one writer: "The city of Gary was planned and built solely for the United Steel Corporation."

fairly interlocked. Whiting, on the lake front, has its small, jagged area abutting on the boundaries of Hammond and East Chicago. Hammond, starting with its two and one-fourth miles of lake shore runs narrowly southward for six or seven miles, then turns eastward in a sort of L, hooking into East Chicago so that its eastern and part of its northern limits bound its sister city on the west and south. East Chicago has an angular area lying between Hammond and the lake shore where the latter trends southeast at an angle of some forty-five degrees, and where this city stops on the east Gary begins, carrying the industrial region twelve miles still further eastward. An attempt to relieve this region of its swampy condition by drainage has been made, the chief agency being an artificial waterway known as the "Burns Ditch," which runs through the eastern part of Gary and connects with the lake there.

Population; Gary—The group of Calumet corporations above described have, according to the latest estimate, an aggregate population in excess of 230,000.* Gary, the latest and largest of them is famous as the municipal wonder of the times. Where in 1906 there was only a waste of swamps and sandhills is now a city of nearly ninety thousand people, modern in every respect—so modern in spirit and so young in years, that it, of all our cities, can be regarded as the product of civic planning. With a great steel industry as its first cause and industries as the foundation for its vitality it has a taxable wealth of \$152,382,970, and the total resources of its financial institutions amount to more than twenty-two millions of dollars. Only twenty-four years old it ranks as the fifth city in the state.

Dunes Literature—The Indiana Dunes region has been written about more than any other scenic part of the state, partly because of its unusual character, and partly, perhaps, because it has been a convenient and inviting field for Chicago talent. Some time ago Mr. Louis J. Baily, present State Librarian, then of the Gary public library, compiled a bibliography of such writings, and his list included about ninety titles. The great majority of these, of course, were short ar-

*The total 15 county 'region of Chicago' makes a population center of 5,050,000 by the 1930 census.

ticles published in periodicals, but the subject has also inspired several books. Of the major works the most compact and the most satisfactory, perhaps, to one whose interest is confined to the dunes, is E. Bailly Stillman's, *The Sand Dunes of Indiana*. George A. Brennan's *The Wonder of the Dunes*, contains a wider range of information than Stillman's book, but the author sometimes wanders rather far afield. *A Naturalist in the Great Lakes Region*, by Elliot R. Downing, deals at length with the dunes flora and fauna. On the esthetic and picturesque aspects of the sand hill country Earl H. Reed has published three books: *The Dune Country*, *Sketches in Duneland*, and *The Voices of the Dunes*; all illustrated by himself. For dunes geology the reader is referred to the Indiana State Geological Report for 1897 and that of 1911.



THE PAVILION

The Secret of Duneland

For days I loitered amid the dunes, following the mazes of their byways, penetrating to hidden spots whither no path led, seeking I knew not what. Something I sensed—something subtle and secret; some pervasive indwelling spirit that hovered all about, but was as intangible as the ether of space. Others had sensed it and striven by pen and pencil to express the haunting message that stirs the soul there, but none had laid bare the heart of the mystery. None ever will or can, for these playings upon the spirit of man are but hintings from the Infinite, which transcend the interpretations of man. Still, we strive to interpret, obeying the inward urge.

Down the center of the narrow belt of wild lands that skirt the coast of the great lake runs a winding "trail", which by its very name and character suggests the aboriginal. That pathway, tradition says, was first marked out by the feet of a now vanished race—a race that lived so close to Nature as to be part and parcel of her primitive forms. Can it be that these softly-sighing winds that wander through every avenue of the place are mournfully seeking the lost ones?

If you ignore the path and go veering like the breezes without guide or compass you will find yet deeper solitudes. On one hand lie the billowing sand hills, here sinking into verdure-choked vales and pockets, there spreading in naked desolation like bits of barren desert, unearthly in their loneliness; on the other the low lands, in many a place impentrate to the foot of man, their accessible spots the more inviting because of the adventure in seeking them. And over all the protecting forest, from bosky undergrowth to giant trees, spreads its canopy of sheltering verdure.

If one is there some day when no other human intruders are abroad with their disturbing noises and even the breezes have ceased, he will find the whole region steeped in a brooding silence suggesting the reverential hush of a cathedral, the dusky spaces of it borrowing splendor from arrows and shafts and fine pencilings of sunshine that pierce the leafage overhead to sow the shadowy forest with "patines of bright gold." It is in the heart of this deep stillness, that one senses most acutely, even poignantly, the hidden something that piques the

imagination and sweeps across the strings of fancy with such fairy touch.

Fairy! Is that word a key to something? My mind goes questing back to that far day when there were pixy people living in a world all their own, near at hand but invisible to mortal eyes. Night revellers, these, slumbering in secret places all through the garish day, their presence unsuspected, but with the coming of the moon and stars and nocturnal shadows the supernatural population was all aboard, the elves to "hang a pearl in every cowslip's ear," and Robin Goodfellow, "that merry wanderer of the night," to ply his mischief at the expense of human creatures. Once Titania and her train and Oberon's retinue were real, even as the poet hath pictured them, but now science and sophistication, alas! have banished them forever.

Yet see what is left us, that science has not altered and sophistication cannot gainsay. In this wilderness silence that seems devoid of every vestige of life a population more dense than ever thronged the imagination of men lurks in every covert, unseen, unsuspected by day; yet when the night-gloom falls they, like the fairy folk of old, are all astir, giving countless proofs of their existence. They fill the night with a million soft sounds, and as the elves left fairy circles in grove and field, showing where they had danced, so nocturnal rovers here leave their records wherever the soft sands are spread, to be interpreted as the tracks of mice and gophers, of squirrels, rabbits and skunks, of toads and snakes. Whether by day or night we know that we are here literally compassed by animate creatures, swamp and morass, dead logs and the carpeting of leaves, the shrubs below and the trees above, each harboring its own kind. And never did the mind of man people the realms of fancy with stranger beings than these children of Nature. All that has been imagined of fairies and sprites, of goblins and gnomes, find their equivalents here in the diversity of life forms, with delicate beauty, hideous ugliness and indescribable grotesqueness dwelling side by side. Could you shrink to a thousandth part of your present bulk and enter into the abodes of the insect population you would find yourself in the company of innumerable monsters of many kinds—bugs and beetles, spiders, bees and whatnot, most of them armed with deadly natural weapons for your destruction.

With a J. Henri Fabre to spy out their mysterious ways you would be let into a plane of marvelous instincts and amazing habits beside which the myths of folklore seem but crude inventions. Most strange of all, perhaps, is that this occult power we call Nature, the chief end of which seems to be the creation of life, undoes her own work by ordaining universal warfare, evolving tooth and claw, talon, beak and mandible to that end. Even the vegetation that shelters and protects the insect is eaten by the insect. Meanwhile tree and shrub and minor plants in endless numbers, interweaving their myriad rootlets in the soil below, sucking up the juices of earth and gathering vitality from the air and sun above, defy all enemies and clothe with a living garment the otherwise barren wastes.

The sun has set, the great glowing ball majestically descending the crimson stairway of the evening clouds till swallowed up by the far waters of the lake. As though it rose from his seething bath a faint vaporish mist spreads over the face of the flood and invades Duneland, where the pale light of waning day slowly gives way to the shadows of the night. Well up the eastern heavens the full moon rides, her silvery beams growing in strength till all the scene below is bathed in a soft effulgence. A new order is ushered in. The dimly visible world grows dream-like, and here in the dusky aisles of the wooded hills and swamps fancy is stirred to life; a thousand forms take shape and people the black grottoes on every hand where the moonshine, shifting through the foliage overhead faintly lights the darkness with its filtered silver. It is a time and place for imaginings and beliefs.

Now is the hour when, in times ago, the fairy clan and all their kith and kin were wont to come forth; and surely the eerie brood has never perished. On every hand, from tree and bush, from every leafy covert, they make the night vocal with a soft, sibilant chorus that seems to pervade all space. Faint hummings and buzzings and dronings are woven into the universal strain. From their hidden haunts whippoorwills, far and near, assail the ear with their plaintive, iterative, never-ceasing cry in which the screech owl joins from time to time with doleful quaverings. From the heart of the great marsh I hear the strange pumping hiccough of a bittern, and from there too the song of the smaller frogs, dominated now and

then by the sonorous bass of the great bullfrog. From the tree-tops, where lurk the treetoads, issue prolonged wailings, and from some far-off place comes floating across the spaces the weird, maniacal laughter of a loon.

Is this jubilation, or it is lamentation? Why should the nature-folk sit and sing through the livelong night except for the sheer joy of existence? And yet, never a one but lives in terror of his stronger neighbor, and the tragedy of extinction impends from every side.

The vagrant winds are astir tonight, and, drawing shoreward from the lake, fill Duneland with sound and motion. A spirit of restlessness prevades the place. The pale moonshine that pierces the woodland depths and mottles the earth moves to and fro as in a ghostly rhythmic dance, keeping time to waves of air that pulse through the leafage in alternate rise and fall. The forest trees slowly wave their boughs and seem to be breathing forth great sighs, as moved by some deep disquiet. Here where the pathway crosses a little open glade a grove of aspens, clustered closely, whisper hysterically together, their leaves, quivering as in terror, glinting in the moonlight. What do they fear?

Mingled with the sighing in the trees there comes faintly from beyond the dunes the steady beating of the surf upon the beach. The waters and the winds, relentless as the tooth of time, are busy with their ancient grudge against the land and all on it, sweeping up and sowing broadcast the sand that is their munition of war. Can it be that the fostering trees are supplicating the fates in behalf of their beleagured children? And yet, after immemorial years of assault here are still the forest and its denizens, all holding their own, and here the battle-front will be for immemorial years to come if Nature is left to herself.

But now to the listening ear comes another sound—throbbing echoes from the turmoil of human civilization that, on the landward side, sends its fringes to the very edge of this narrowing fastness of Nature. Interpreted from one viewpoint it is an ominous, sinister sound, compounded of many sounds—the incessant dronings of speeding autos on the highway less than a mile away; the roarings of distant trains and shrieking of whistles. From that viewpoint this blended, omnipresent voice of civilization speaks of an oncoming, irre-

sistable, destroying force, more deadly far than waves and wind and flying sands.

And now, as fancy turns that way I seem to hear in the insect choir, in the rustling of the aspens and the susurrations of the forest monarchs a threnody, according with the wailing tree-toad, the banshee cry of the owl, the plaintive whippoorwill. Or (another shifting of the fancy) it may all be Nature's way of singing paeans of praise, for has not Civilization itself put forth a hand to stay the threatening fate?

I cannot penetrate to the secret of Duneland, for that, like the secret of the Sphinx, is one of the enigmas of the ages. And yet in this that I have written there is a kind of meaning; but there be those who will never know that it has meaning.

CONSERVATION: INDIANA DUNES IMPERILED

By JOHN B. OAKES

A LAST-MINUTE, last-ditch fight to save the last four miles of one of the most notable interior shore-front areas of this country—the Indiana Dunes—has just been undertaken in Congress by Senator Paul H. Douglas of Illinois.

Introducing a bill to create the Indiana Dunes National Monument, Senator Douglas thereby called national attention to a dune area along Lake Michigan, still in its original state and yet only a stone's throw from the industrial complex of northwestern Indiana and less than forty miles east of Chicago itself.

When Stephen Mather, creator of the national park system, first proposed the Indiana Dunes region as a national park a generation or more ago, it contained twenty-five uninterrupted miles of duneland, backed up by bog and woods. Now, except for a small state park, there are but four miles left—but they are a tremendous four miles which, if Congress has the imagination and vision to snatch them from the jaws of industrialization, could become a national monument in more ways than one.

A True Monument

These four miles would be a national monument in the accepted park sense, as a small area set aside for permanent preservation because of its unusual esthetic, scientific or historic qualities (and the Indiana Dunes can claim all three). But such a park would also be a monument to the determination of the American people to save some of its great natural heritage for the enjoyment and instruction of present and future generations even at the expense of immediate material gains.

As Senator Douglas said in his fine speech of May 26:

"The problem of the dunes is a symbol of the crisis that faces all America. It is as though we are standing on the last acre, faced with a decision as to how it should be used. In actuality, it is the last acre, the last acre of its kind; in essence it foreshadows the time not too far removed when we will, in all truth, be standing on the last unused, unprotected acre, wondering which way to go * * *

This "last acre" is at present



INDIANA DUNELAND—Surrounded by industry.

owned by the Bethlehem Steel and the National Steel Companies. They plan to develop this oasis into another industrial center. Senator Douglas points out that the Army's Corps of Engineers has blueprinted a harbor to slash through the middle of this park, eliminating the historical trails, uprooting the botanical and biological exhibit, * * * draining the bogs, eliminating for all time the moving, lifting, shifting landscape that has been the source of inspiration for artists, writers, and just plain people for generations."

Miracle Needed

It is often fruitless and it is always difficult for a member of Congress to oppose any plan for "development" or industrialization of an area when large individual or corporate economic interests are as directly and immediately involved as in the present case. But if by some miracle Senator Douglas' proposal should succeed, it would be a triumph for long-range values that are frequently overlooked.

"I cannot feel that the boards of directors of these two companies [Bethlehem and National], when they realize fully the tragic costs and consequences of placing their plants in this park * * * will insist upon going

through with their plan," Mr. Douglas says. His bill is S. 3898; a companion bill just introduced in the House by Representative Saylor of Pennsylvania, one of Congress' most active conservationists, is H. R. 12689.

OTHER AREAS

The immediate threat to the last four miles of the Indiana Dunes gives to Mr. Douglas' proposal a special emergency character, but there are plenty of other places in the United States that are also of national park caliber and will have to be acquired for that purpose within the next few years if they are to be protected at all.

One of the most beautiful, most rugged and at the same time most delicate, is the northern Cascades area in north-central Washington, an Alpine wonderland already in public hands (Forest Service) but, to a large extent, without the further special protection it needs to keep it as it is. The Wheeler Peak area in eastern Nevada is another.

Some national park areas of great potential interest are still available even in the East, though they are disappearing rapidly under stress of population and industrial pressures. For instance, one of the last remaining Eastern wilderness regions is the Allagash country

of northwestern Maine, to which the Secretary of the Interior's Advisory Board on National Parks at its last meeting urgently called attention, as it did to the Indiana Dunes and to Padre Island, off the South Texas coast in the Gulf of Mexico.

The Great Beach area of Cape Cod is under active consideration for the national park status it certainly deserves before it is ruined by exploitation; and Cumberland Island, a lush semi-tropical estate off the Georgia coast, is still another.

WILDERNESS BILL

The most important general conservation measure now in Congress is the Wilderness Bill (S. 1176), which has recently been revised and improved to meet certain bureaucratic objections brought against it by some Government agencies. This measure is still a magna carta for the protection and preservation of wild areas in the public lands of the United States, and its passage at this session would be a conservation landmark.

Senators Neuberger of Oregon and Humphrey of Minnesota deserve great credit for the persistence and patience they have shown in trying to get it through Congress, an effort that may yet succeed before the close of the session.

The bill in essence sets as basic legislative policy the establishment of a National Wilderness Preservation System, to be composed "of areas of public land * * * retaining their natural primeval environment and influence and being managed for purposes consistent with their continued preservation as wilderness."

Contrary to many erroneous and misleading statements about the measure—particularly a report of the Chamber of Commerce of the United States—the bill could not abolish the multiple-use principle followed on national forest lands but, indeed, specifically provides for continuing administration of the national forests "with the general objectives of multiple use and sustained yield." But of course the wilderness areas specially set aside within the national forest would be protected by law from lumbering, as they are now by administrative order.

Senators Neuberger, Morse, Humphrey and Murray are co-sponsoring S. 3898 introduced by Senator Douglas to establish the Indiana Dunes National Monument.

In the House of Representatives, Congressman John P. Saylor of Pennsylvania has been joined by Congressmen Barratt O'Hara and Charles Melvin Price of Illinois in the introduction of similar bills.

The above article by Mr. Oakes (reprinted from The New York Times of June 1) was inserted in the Congressional Record on June 2, 1958 by Senator Neuberger.